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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,923	02/14/2002	Hiroaki Mukai	219465US2	4790

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EXAMINER

PHUNKULH, BOB A

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 08/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

87

Office Action Summary	Application No. 10/073,923	Applicant(s) MUKAI ET AL.	
	Examiner Bob A. Phunkulh	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-6 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 7-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This communication is in response to applicant's 05/22/2006 amendment(s)/response(s) in the application of **MUKAI et al.** for "**BANDWIDTH UPDATING METHOD AND BANDWIDTH UPDATING APPARATUS**" filed 02/14/2002. The amendment/response to the claims have been entered. Claims 3-4 have been canceled. No claims have been added. Claims 1-2, 5-20 are now pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Matsunaga et al.* (US 6,434,164), hereinafter *Matsunaga*, in view of *Jeffries et al.* (US 7,065,045), hereinafter *Jeffries*.

Regarding claims 1 and 2, *Matsunaga* discloses a dynamic bandwidth updating method for a communications system in which a plurality of subscriber apparatuses (stations 30-32, see figure 1) and a station apparatus (center station 10, figure 1) are connected to the same transmission channel for bidirectional communication (link 20, see figure 1), for dynamically updating a bandwidth allocated in a direction of upstream transmission from the subscriber apparatuses to the station apparatus, comprising the steps of:

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calculating a bandwidth usage rate from a bandwidth allocated in a bandwidth updating period and a bandwidth actually used in the bandwidth updating period (calculating upstream rate step 712, see figure 5); and

determining a bandwidth to be allocated in a subsequent bandwidth updating period based on the bandwidth usage rate (bandwidth assigned after updating, see step 714, figure 5),

wherein the allocation of bandwidth involves ensuring that a minimum guaranteed bandwidth guaranteeing a minimum level of communication is allocated to the subscriber apparatus (see col. 2 lines 7-22).

Matsunaga fails to explicitly disclose that determining a surplus bandwidth which is a result of subtraction of the minimum guaranteed bandwidth from an allocated bandwidth (see col. 2 lines 7-22).

Jeffries, on the other hand, discloses the surplus bandwidth (calculate benefit) is equal to the link capacity minus the sum of minimum guaranteed bandwidths (see steps 158, figure 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made includes the teaching of *Jefferies* in the system taught by *Matsunaga* when determining the excess or surplus bandwidth in order to maximize the link capacity with maintaining customer's service level agreement.

Regarding claims 5 and 6, *Matsunaga* discloses calculating in the subscriber apparatus a requested surplus bandwidth requested of the station apparatus (col. 3

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lines 14-27); and determining in the station apparatus the surplus bandwidth based on the requested surplus bandwidth, so as to determine the bandwidth to be allocated (col. 2 line 60 to col. 3 line 13).

Regarding claims 17 and 18, *Matsunaga* discloses a bandwidth allocated to the subscriber apparatus does not exceed a maximum bandwidth set up for the subscriber apparatus (see col. 2 lines 60 to col. 3 line 13).

Regarding claims 19 and 20, *Matsunaga* discloses a dynamic bandwidth updating apparatus for a communications system in which a plurality of subscriber apparatuses (subscriber stations 30-32, see figure 1) and a station apparatus (center station 10, see figure 1) are connected to the same transmission channel for bidirectional communication, for dynamically updating a bandwidth allocated in a direction of upstream transmission from the subscriber apparatuses to the station apparatus, wherein a bandwidth usage rate is calculated from a bandwidth allocated in a bandwidth updating period and a bandwidth actually used in the bandwidth updating period (calculating upstream rate step 712, see figure 5), and a bandwidth to be allocated in a subsequent bandwidth updating period is determined based on the bandwidth usage rate (bandwidth assigned after updating, see step 714, figure 5).

Allowable Subject Matter

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Claims 7-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any response to this action should be mailed to:

The following address mail to be delivered by the United States Postal Service (USPS) only:

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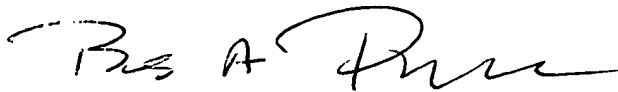
Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tuesday from 8:00 A.M.

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to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Wellington Chin**, can be reach on **(571) 272-3134**. The fax phone number for this group is **(571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bob A. Phunkulh
Primary Examiner
TC 2600
Technology Division 2616
August 17, 2006

BOB PHUNKULH
PRIMARY EXAMINER